

CLAIMS

1. A pressure regulator and gaseous fuel internal combustion engine, comprising:

5 (a) an internal combustion engine including a fuel line source having an outlet in communication with the engine, the fuel line including a controllable valve for regulating gaseous fuel pressure at the outlet;

(b) a variable venturi or fixed venturi carburetor in communication with the fuel line outlet and the engine;

10 (c) a first sensor providing a first signal corresponding to gaseous fuel pressure at the outlet;

(d) a controller responsive to the first signal for controlling the valve and regulating gaseous fuel pressure to a desired pressure; and

(e) wherein the controllable valve is a rotary actuated butterfly valve.

2. The engine of claim 1, wherein the desired pressure is set by a user.

15 3. A pressure regulator and gaseous fuel internal combustion engine, comprising:

(a) an internal combustion engine including a fuel source and line having an outlet in communication with the engine, the fuel line including a controllable valve for regulating gaseous fuel pressure at the outlet;

20 (b) a variable venturi or fixed venturi carburetor in communication with the fuel line outlet and the engine;

(c) a first sensor providing a first signal corresponding to gaseous fuel pressure at the outlet;

25 (d) at least one additional sensor for measuring at least one of the following conditions: Manifold Absolute Pressure, engine speed, Manifold Air Temperature, Engine Coolant Temperature, EGO, UEGO, Barometric Pressure, Engine Mass Air Flow, Throttle Position, and Throttle Inlet Pressure;

30 (e) a calculator for calculating a desired gaseous fuel pressure at the outlet based on the input from the additional sensor in "d" and providing a second signal corresponding to the desired gaseous fuel pressure;

(f) a controller responsive to the second signal moving the controllable valve;

and

(g) wherein the controllable valve is a rotary actuated butterfly valve that is responsive to the controller to adjust the gaseous fuel pressure at the outlet and obtain the desired gaseous fuel pressure.